



CYPRESS

Driving Dual Transmission Lines

In some instances, it becomes necessary to drive two transmission line traces from a single FTG output pin. Consider the example of the W149 providing six PCI output pins, but the application requires seven PCI signals. The W149 was designed to provide this flexibility to the user. The PCI output drivers exhibit an output impedance of 15Ω , and are thus capable of driving two traces.

The design considerations are as follows:

- The two series terminated lines must be of equal length.
- Both series termination resistors must be physically close to the W149 output pin.
- Proper selection of series termination resistor.
 $R = Z(\text{trace}) - 2(Z_{\text{out}})$

In this example, $R = 70 - 2(15)$, $R = 39\Omega$ (nearest available value)

For the schematic representation, please see next page detail for PIN 8.

